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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,942	02/17/2004	Michal Aaron Hastings	FUELP0242US	9368
7590 08/19/2004			EXAMINER	
Renner, Otto, Boisselle & Sklar 19th Floor 1621 Euclid Ave. Cleveland, OH 44115			TRIEU, THAI BA	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 08/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/779,942

Applicant(s)

HASTINGS ET AL.

Examiner

Thai-Ba Trieu

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-15,17 and 18 is/are rejected.
- 7) ☒ Claim(s) 8 and 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Specifically, in claim 10, line 3, the recitations of "***a pressurized compartment and a non-pressurized compartment***" are incorporated with the specification.

Claim Objections

Claims 10 and 16 are objected to because of the following informalities:

- In claim 10, lines 2-3 should be replaced by following:
 - a diaphragm in the [[valve]] **actuator** housing dividing the
 - [[valve]] **actuator** housing --.
- In claim 16, line 3, "***the housing***" should be replaced by -- ***the valve housing*** --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 11 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically,

- In claim 11, the recitation of “**position can be changed**” renders the claim indefinite, since it is not clear that under which condition the position of the adjustable spring seat is changed to vary the spring length, and under which condition the position of the adjustable spring seat is not changed. Applicants have to identify the conditions of the adjustable spring seat.

- In claim 17, the recitation of “**the housing forming approximately a ninety degree angle between the legs**” renders the claim indefinite, since it is not clear that which housing is to be referenced to such as “**the actuator housing**” or “**the valve housing**” . Applicants have to identify the referenced housing, which forms approximately a ninety-degree between the legs.

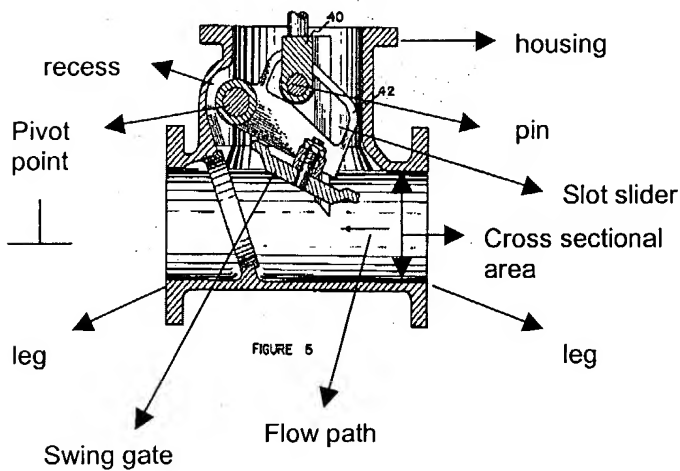
Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 9, 12, 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Hay (Patent Number 3,334,858).



Regarding claims 1-7 and 9, Hay discloses a remote wastegate for a turbocharged internal combustion engine system, comprising:

a housing (Not numbered, see attached Figure 5) having a passage defining a path for the flow of exhaust gases

from an inlet end of the passage to an outlet end of the passage, and

a swing gate pivotally mounted in the passage for movement between a closed position that blocks the flow of exhaust gases through the passage and an open position that allows the flow of exhaust gases through the passage (See attached figure 5),

wherein the housing further includes a recess in the passage into which the swing gate is at least partially received in the open position to allow an unrestricted flow of exhaust gases through the passage (See attached Figure 5);

wherein when the swing gate is in the open position, a cross-sectional area of the flow path through the passage in the housing is substantially constant (See attached Figure 5);

an actuator connected to the wastegate housing for controlling the movement of the swing gate (See Figure 4, Column 2, lines 62-66);

wherein the actuator includes a control rod (19) connected to the swing gate to move the swing gate between the open and closed positions (See Figure 4);

wherein the control rod (19) generally acts in a direction aligned with at least a portion of the passage through the valve housing (See Figures 4-5);

wherein the control rod (19) is connected to the swing gate with a pin and slot slider arrangement (See attached Figure 5);

wherein the valve housing defines a ninety degree angle in the flow path (See attached Figure 5); and

wherein the swing gate has a pivot point that lies outside the flow path (See attached Figure 5).

Regarding claims 14 and 17, Hay discloses a remote wastegate for a turbocharged internal combustion engine system, comprising:

a housing having a passage defining a path for the flow of exhaust gases from an inlet end of the passage to an outlet end of the passage (See attached Figure 5), and

a swing gate pivotally mounted in the passage for movement between a closed position that blocks the flow of exhaust gases through the passage and an open position that allows the flow of exhaust gases through the passage, wherein the housing has a ninety degree actuator parallel to one leg of the housing and the swing gate moves from a position blocking the flow through one leg to an open position removed from the blocking position to permit flow through the one leg (See attached Figure 5);

wherein the housing forms approximately a ninety-degree angle between two legs (See attached Figure 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hay (Patent Number 3,334,858), in view of Shadbourn (Patent Number 4,377,070).

Hay discloses the invention as recited above; however, Hay fails to disclose the detailed structure of the actuator and a bypass to divert exhaust gas around the turbocharger.

Shadbourn teaches that it is conventional in the turbocharger control actuator art, to utilize the actuator including an actuator housing (50), a diaphragm (48) in the valve housing dividing the valve housing into two compartments (60, 62), a pressurized compartment and a nonpressurized compartment, a control rod (46) interconnecting the diaphragm (48) and the swing gate (36), and a spring (77) within one of the compartments to apply a spring force to the control rod (46); an adjustable spring seat (10) whose position is changed to vary the installed spring length of the spring (77); and at least one section of conduit for making a bypass path to divert exhaust gases around

the turbocharger (See Figures 1-4, Column 1, lines 44-68, Column 2, lines 1-2 and 45-68, Column 3, lines 1-16, Column 4, lines 43-68, and Column 5, lines 1-19).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized the detailed structure of the actuator and a bypass to divert exhaust gas around the turbocharger, as taught by Shadbourn, to improve the accuracy of controlling the Hay swing valve, since the use thereof would have increased the performance efficiency of the whole system of a turbocharged internal combustion engine.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hay (patent Number 3,334,858), in view of Ando (Patent Number 5,501,427).

Hay discloses the invention as recited above, and further discloses a recess in the passage receives at least a pad of the swing gate when the swing gate is in the fully open position (See attached Figure 5); however, Hay fails to disclose the swing gate including a sealing surface that mates with a seat that circumscribes the one leg when in the closed position.

Ando teaches that it is conventional in the valve art, to utilize the swing gate including a sealing surface (16) that mates with a seat that circumscribes the one leg when in the closed position (See Figures 1-6, Column 4, lines 3-12).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized the swing gate including a sealing surface that mates with a seat that circumscribes the one leg when in the closed position, as taught by Ando, to improve the regulation function of the fluid flow through the valve.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hay (patent Number 3,334,858), in view of Design choice.

Hay discloses the invention as recited above, and further discloses when the wastegate is in the open position, it forms an angle relative to at least one of the legs; however, Hay fails to disclose the angle of approximately four five degrees.

One having an ordinary skill in the valve art, would have found the angle of approximately four five degrees as a matter of design choice depending on the engine requirements. Moreover, there is nothing in the record, which establishes that the claimed the valve angle at a desired position for improving the regulation function of the fluid flow in the turbocharged internal combustion engine, presents a novel of unexpected result (See *In re Kuhle*, 526 F. 2d 553, 188 USPQ 7 (CCPA 1975)).

Allowable Subject Matter

Claims **8 and 16** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The IDS (PTO-1449) filed on May 19, 2004 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Heggem (US Patent Number 3,119,594) discloses a swing gate valve having a valve face (52) typically including in one embodiment a resilient portion (54), which is adapted to sealingly engage with the valve seat (56).

- Yamamoto (US Patent Number 4,637,210) discloses a supercharger control apparatus of a supercharged engine.

- Donahue, Jr. et al. (US Patent Number 4,174,091) disclose a drain valve.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
August 19, 2004

A handwritten signature in black ink, appearing to read 'Thai-Ba Trieu', with a long horizontal flourish extending to the right.

Thai-Ba Trieu
Patent Examiner
Art Unit 3748